

### **Remarks/Arguments**

Claims 28 to 53, 56 and 57 are pending. Claims 28, 56 and 57 have been amended to eliminate an antecedent basis problem in two places.

The Office Action stated: that the amendment filed on September 18, 2006, in response to the new rejection under 35 U.S.C. §112, second paragraph, made by the Board Of Patent Appeals And Interferences ("the Board") in the Decision On Appeal dated July 19, 2006, ("the Board's decision"), has been entered; that Claims 54 and 55 have been cancelled; that claims 56 and 57 have been added; that Claims 28 to 53, 56, and 57 are pending in the application; that Claims 28 to 53, 56 and 57 are withdrawn from consideration as directed to a non-elected invention.

The Office Action stated that the amendment filed on November 26, 2002, "stands objected to" [emphasis supplied] under 35 U.S.C. §132 as introducing new matter into the disclosure for the reasons of record as set forth in Paragraph 5 of the Office Action mailed on February 13, 2003, (Paper No. 9). Applicants continue to traverse this objection based upon the reasons of record set out in pages 22 to 23 of the Amendment filed on June 6, 2003. The Examiner has not carried her burden of proof that the amendment was new matter.

The Examiner has only made conclusionary statements which are insufficient to support this rejection. The Examiner has not carried her burden of proof. As quoted above, Section 70.03(o) of the M.P.E.P. requires that the Examiner's explanation address the unresolved questions that raise a doubt. The Examiner has not provided such required explanation so it is assumed that there is no basis for the Examiner's rejection and conclusion.

Applicants have shown above that the claim recitation is necessarily described and supported in the specification, and by inherency, and by the knowledge of one skilled in the art. Those showings are incorporated herein so as to not unduly lengthen this brief.

The Examiner has written that the recitation “the temperature at the surface of the plastic coating (14) and the adhesion-promoting agent (16) lies *below* the crystallite melt point ( $T_K$ ) of the plastic” in independent Claim 28 is a new matter since it was not described in the specification as filed. Applicants traverse this statement for the above and following reasons. Applicants coextrude the polyolefin (i.e., polypropylene or polyethylene) and the adhesion-promotion agent. The melted materials exit the coextruder nozzle. The coextrudate is still very hot for a substantial time after exiting the nozzle. These are inherent features of applicants’ coextrusion, and the Examiner has not factually established otherwise in the record.

When the very hot coextrudate is combined with the aluminum foil, the temperature of the aluminum has to be low enough so that the outer surface of the polyolefinic portion of the coextrudate stays below the crystallite melt point ( $T_K$ ) of the olefin. The coextrudate is combined with the aluminum foil between two rollers. The aluminum foil acts as a heat sink re the coextrudate – this is inherent - thereby maintaining the temperature of the outer surface of the plastic coating below the crystallite melt point ( $T_K$ ) of the olefinic plastic.

The Examiner has not established in the record that applicants were not in possession of the claimed invention at the time of filing. The Examiner has not carried her burden of proof.

The Examiner has not carried her burden of proof of establishing that material inserted into the specification is new matter. The Examiner has merely quoted the added material and asserted that it is new matter. The Examiner has not even set out any reason or explanation of why the added material is new matter, or any facts to support her assertion of new matter.

The Examiner is also in error in her assertion that applicants can only show that the added material is not new matter by "pointing" to "pages and lines in the specifications." Note that the Examiner has not cited any decisions, regulations, or the like as supporting her assertion. However, the burden of proof is on the Examiner, and not on the applicants.

Applicants have done that which is required of them. Applicants have set out why there was support for the added material.

The Examiner then asserted that the added material was new matter. However, such assertion and quotation of the added material is not sufficient to carry the Examiner's burden of proof that the added material is new matter and that applicants' reasons, etc., of support for the added material are insufficient, incorrect or the like.

Once the Examiner asserts that added material is new matter, the ball (i.e., burden of proof) is in her court. This is shown in the M.P.E.P. In this case, the Examiner has not carried her burden of proof.

To the simple question of why is the added material new matter (within the meaning of 35 U.S.C. 132), the Examiner has not provided any facts, reasons or the like in the record.

The Examiner has not provided in the record the required explanation, including supporting reasons, facts and the like, of (i) her position, and that (ii) addressed applicants' statement of why the added material was supported. The Examiner has not carried her burden of proof and has not established any prima facie showing of new matter.

The Examiner has written that applicants argue that the Examiner has not carried her burden of proof of factual establishment of a new matter. The Examiner has not carried her burden of proof.

Claim 47 does not involve new matter. That the temperature of the aluminum foil is at room temperature when combined with the coextrudate has been shown to be supported by scientific and technical convention. Therefore, Claim 47 is supported by the specification, and new matter is not involved. The other claims do not involve new matter, and only recite that the temperature of the aluminum foil is at room temperature when the aluminum foil and the coextrudate are combined.

This objection should be withdrawn.

The Office Action stated that the following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 28 to 53, 56, and 57 have been rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants traverse this rejection.

The Office Action stated that a recitation "the temperature at the surface of the plastic coating (14) and the adhesion-promotion agent (16) lies below the crystallite melt point ( $T_K$ ) of the plastic" in independent Claim 28 is a new matter since it was not described in the specification as filed. Applicants traverse this statement as no new matter is involved.

The specific language in independent Claim 28 ,etc., that the Examiner incorrectly asserts is new matter is:

"..., the temperature of the coextruded-coated aluminum foil being such that the temperature at outer surface of the plastic (14) of the coextrudate of the plastic (14) and the adhesion-promotion agent (16) lies below the crystallite melt point ( $T_K$ ) of the plastic (14). ..." [Emphasis supplied]

The Examiner has the burden of proof to establish, by sufficient evidence or reasoning in the record, that such claim language is new matter. However, other than the Examiner quoting (all or most of) such claim language and asserting that the Examiner could not find such added material in the specification (and claims) as filed, which is not sufficient under the law, the Examiner has not provided sufficient evidence

or reasoning in the record to carry her burden of proof to establish a prima facie case of new matter.

Applicants advance that they have pointed out where the subject matter in dispute is supported.

The Examiner has earlier written that the Examiner respectfully disagrees with this argument; and that the Examiner expressly stated in the Office Action mailed on February 13, 2003 (Paper No. 9) that the material added with the Amendment filed on November 26, 2002, which is not supported by the original disclosure is as follows:

*"The temperature of the aluminum foil, with which the coextruded plastic and adhesion-promotion agent is being combined, is such that the temperature at the surface of the plastic coating and the adhesion-promotion agent lies **below** the crystallite melt point ( $T_k$ ) of the plastic" because it introduces new matter into the disclosure.* This quotation by the Examiner from one of her earlier Office Actions is only a conclusion and it does not provide the reasons and facts required to support such conclusions. The Examiner has not complied with M.P.E.P. 706.03(o). The required explanation is missing. The Examiner has not carried her burden of proof.

The Examiner has earlier written that, to overcome the Examiner's statement of introducing a new matter, applicants have burden of proof that the amendment is not a new matter not by scientific/technical principles and the knowledge of one skilled in the art, but pointing pages and lines of the specification as filed showing **factual language** describing the amendment. Applicants traverse this statement as being clearly incorrect. Section 2163.07 of the M.P.E.P. is entitled "Amendments to Application Which Are Supported in the Original Description" and states:

“The mere inclusion of dictionary or art recognized definitions known at the time of filing an application would not be considered new matter. If there are multiple definitions for a term and a definition is added to the application, it must be clear from the application as filed that applicant intended a particular definition, in order to avoid an issue of new matter and/or lack of written description.”

Section 2163.07(a), entitled “Inherent Function, Theory, or Advantage”, allows insertion of subject matter based on inherency. The Examiner’s assertion is clearly in error.

In the Amendment, filed on November 26, 2002, applicants included the following information to show that the subject matter into the specification was not new matter:

“Applicants extrude a coextrudate onto the aluminum foil and then heat the aluminum foil with the coextrudate thereon by continuously passing it through an oven at a temperature set so that the temperature of the surface of the polypropylene coating and the acid-modified polypropylene lies above the crystallite melt point of the polypropylene. The coextruded-coated aluminum foil is then immediately shock-like cooled (e.g., at least 10°C) so that the crystalline proportion at least in the surface area of the cooled polypropylene coating and the crystal grains in this area are as small as possible.”

“Since the oven heating requires that the temperature of the surface of the polypropylene coating and the acid-modified polypropylene of the exiting coextruded-coated aluminum coating lies above the crystallite melt point of the polypropylene, the temperature of the surface of the polypropylene coating and the acid-modified polypropylene of the coextruded-coated aluminum entering the

oven lies below the crystallite melt point of the polypropylene. This is implicit disclosure in applicants' specification. Original independent process Claim 1, for example, did not recite increasing the crystalline melt point temperature of the polypropylene, so the temperature (of the surface of polypropylene and the acid-modified polypropylene) had to be below the crystalline melt point temperature of the polypropylene. In this manner, applicants' process is substantially and unobviously different from the process of Takano et al." [Page 10, line 26, to page 11, line 15]

Although required to do so, the Examiner, has not addressed at any time applicants' statement of facts and reasons why the added material is supported. The Examiner has not carried her burden of proof or even rebutted applicants' showing.

In the Amendment, filed on June 6, 2003, applicants included the following information to show that the subject matter inserted into the specification was not new matter:

"Applicant disagree that such quoted material is new matter for the reasons given above and below."

"Referring to Figure 1, the distance between the outer end of the nozzle of extruder 12 and the nip region of rollers 20, 22 is small. The result of this short distance is that the reduction in temperature of melted coextrudate 14, 16 is minimal. The melted coextrudate 14, 16 and the aluminum foil met going into the nip region and are in the nip region for an instance. However, the temperature of the melted coextrudate essentially instantaneously drops to the extent that the temperature of the outer surface of the extrudate is less than the crystallite melt



point of the polyolefin 14. This is so because, if the outer surface of the olefin was at or above such melt temperature, the pressure from the two rollers would squish and disrupt or force away at least the outer portion of the coextrudate. The temperature of the aluminum foil, before and after contact with the melted coextrudate, is below the crystallite melt point of polyolefin 14. The language objected to by the Examiner is supported by the disclosure, scientific/technical principles, and the knowledge of one skilled in the art as to what would happen in the first step of applicants' claimed process as a result of the apparatus and its arrangement shown in Figure 1, for example." [Page 22, line 15, to page 23, line 10]

Although required to do so, the Examiner has not addressed at any time applicants' statement of facts and reasons why the added material is supported.

To repeat, the Examiner has the burden of proof to establish, by sufficient evidence or reasoning in the record, that such claim language is new matter. However, other than the Examiner quoting (all or most of) such claim language and asserting that the Examiner could not find such added material in the specification (and claims) as filed, the Examiner has not provided sufficient evidence or reasoning in the record to carry her burden of proof to establish a prima facie case of new matter.

Among other things, there are other ways, such as, knowledge in the art, prior art reference/literature, inherency, and the like, to establish that such added material is not new matter.

The Supreme Court in *Webster Loom v. Higgins*, 105 U.S. 580 (1881), stated:

“That which is common and well known is as if it were written out in the patent and delineated in the drawings.” [Page 586]

The CAFC in *Paperless Accounting, Inc. v. Bay Area Rapid Transit System*, 231 USPQ 649, (1986), stated:

“A patent applicant need not include in the specification that which is already known to and available to the public.” [Page 653]

The CAFC in *Spectra-Physics, Inc. v. Coherent, Inc.*, 3 USPQ2d 1737 (1987), stated:

“A patent need not teach, and preferably omits, what is well known in the art.” [Page 1743]

The CAFC in *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81 (1986), stated:

“Furthermore, a patent need not teach, and preferably omits, what is well known in the art.” [Page 94]

The CAFC in *In re Wands*, 8 USPQ2d 1400 (1988), stated:

“A patent need not disclose what is well known in the art.” [Page 1402]

Applicants advance they have pointed out where the subject matter in dispute is supported.

M.P.E.P. 2163.04 states:

“2163.04 Burden on the Examiner with Regard to the Written Description Requirement”

“The inquiry into whether the description requirement is met must be determined on a case-by-case basis and is a question of fact. *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). A description as filed is presumed

to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. *Wertheim*, 541 F.2d at 263, 191 USPQ at 97." [Emphasis supplied]

Such required preponderance of evidence has not been supplied by the Examiner.

Applicants print out that the alleged new matter in the form of language added to the claims (and to the specification) is supported by the original specification, the original drawing and information well known in the art and by the public. The Examiner has incorrectly asserted that such language has to be "factual language" describing the added material identified by pages and lines of the specification.

The Examiner even has the burden of proving that the language added to the claims (and the specification) is new matter.

M.P.E.P. 2163.03 (I) states:

"I. STATEMENT OF REJECTION REQUIREMENTS"

"In rejecting a claim, the examiner must set forth express findings of fact which support the lack of written description conclusion (see MPEP § 2163 for examination guidelines

pertaining to the written description requirement). These findings should:

(A) Identify the claim limitation at issue; and

(B) Establish a *prima facie* case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of 'unpredictability in the art' is not a sufficient reason to support a rejection for lack of adequate written description. A simple statement such as 'Applicant has not pointed out where the new (or amended) claim is supported, nor does there appear to be a written description of the claim limitation "\_\_\_\_" in the application as filed,' may be sufficient where the claim is a new or amended claim, the support for the limitation is not apparent, and applicant has not pointed out where the limitation is supported.'

[Emphasis supplied]

While the situation at bar involves subject matter added in a new claim, the Examiner still had the burden of proof to supply reasons (and/or evidence) why the added matter was new matter. However, the Examiner has never supplied such reasons (and/or evidence) in the record so no *prima facie* case of new matter has ever arisen.

The conditions necessary for the use of the so-called "simple statement" approach referred to in M.P.E.P. 2163.03 (I) never has existed because appellants

"pointed out where the limitation is supported" in the same amendment (filed on November 26, 2002) that inserted the alleged new matter into the claims (and the specification). The Examiner has never supplied the sufficient reasons (and/or evidence) to overcome such support for the claim amendment and to establish a prima facie case of new matter. Applicants have supplied support for the subject matter in dispute.

This rejection should be withdrawn.

Claims 28 to 53, and 57 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention. Applicants traverse this rejection.

The Office Action stated that 'newly' submitted limitation "an extremely small size" renders Claims 28 and 57 indefinite for the same reasons as set forth in the Decision On Appeal, dated July 19, 2006:

Upon review of Appellants' disclosure (which includes Figures 1 and 2), it is not possible to find a clear depiction of the crystal grains in the outer surface area. There is no indication of an acceptable size for the crystal grains in the outer surface area. As such, it is not possible to determine the size of the grains in the outer surface and whether these grains are "as small as possible" or "an extremely small size," as presently claimed. Thus, the claims, as presently written, do not circumscribe the boundaries of the claims with a reasonable degree of particularity with respect to the particular grain size that is embraced by "as small as possible" or "an extremely small size". In light of the above noted

inconsistencies, one of ordinary skill in the art cannot ascertain the boundaries of protection sought by the claim.

This is a misquotation of the Board's Decision On Appeal. Nowhere does it contain the phrase "an extremely small size".

The correct quotation from the Board's Decision On Appeal (page 8) is:

"Upon review of Appellants' disclosure (which includes Figures 1 and 2), we cannot find a clear depiction of the crystal grains in the outer surface area. There is no indication of an acceptable size for the crystal grains in the outer surface area. As such, it is not possible to determine the size of the grains in the outer surface and whether these grains are 'as small as possible' as presently claimed. Thus, the claims, as presently written, do not circumscribe the boundaries of the claims with a reasonable degree of particularity with respect to the particular grain size that is embraced by 'as small as possible'."

"In light of the above noted inconsistencies in each of the independent claims on appeal, i.e., claims 28 and 55, we are of the view that one of ordinary skill in the art cannot ascertain the boundaries of protection sought by the claims on appeal. Thus, we determine that the appealed claims run afoul of the requirements of the second paragraph of § 112."

Accordingly, the Examiner has no legal or factual basis in the record for this rejection.

Examination of claims under 35 U.S.C. 112, second paragraph, according to Section 2173.02 of the M.P.E.P requires:

Definiteness claim language must be analyzed, not in a vacuum, but in the light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

[Emphasis Supplied]

Nowhere in the Board's decision did the Board and in the Office Action did the Examiner factually determine in the record the level of ordinary skill in the art. Hence, the Board and the Examiner have not made a viable rejection because there is no way that the Board and the Examiner could know or ascertain the claim interpretation that would be given by one ordinarily skilled in the art.

The Examiner has failed in carrying out the requirements of the mandatory analysis so the Examiner cannot have ascertained if the so-called "principal purpose" of Section 112, second paragraph has not been met. Applicants believe that their claims meet the principal purpose of the second purpose (the Examiner has not shown otherwise).

The C.C.P.A. in *In re Moore*, 439 F. 2d 1232, 1235, 169 USPQ 236, 238, (1971), of whether the claims of an application satisfy the requirements of the second paragraph of 112 it is:

[T]o determine whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity. It is here where the definiteness of language employed must be analyzed-not in a vacuum, but always in light of the teachings of the prior art and of the particular application

disclosure as it would be interpreted by one possessing the ordinary level on skill in the pertinent art. [Footnote omitted.] [Emphasis Supplied]

This quotation is in essence the same as the mandatory analysis requirements, set out in the portion of the M.P.E.P. that applicants' quoted above. The Examiner's position is defective as it did not factually determined in the record the level of ordinary skill in the art, hence the Examiner cannot correctly ascertain the interpretation by one ordinarily skilled in the art of the teachings of the prior art and applicants' disclosure.

Clear disclosure of the crystal grains being in the outer surface is present in applicants' disclosure. Such crystal grains have an extremely small size (see page 4, lines 8 and 9). This allows one ordinarily skilled in the art to ascertain the boundaries of protection sought by the claims on appeal. The Examiner has not factually proven otherwise, even prima facially.

Section 2173.05(b).B. of the M.P.E.P. states:

"The phrase 'a silicon dioxide source that is essentially free of alkali metal' was held to be definite because the specification contained guidelines and examples that were considered sufficient to enable a person of ordinary skill in the art to draw a line between unavoidable impurities in starting materials and essential ingredients. In re Marosi, 710 F.2d 799, 218 USPQ 289 (CCPA 1983). The court further observed that it would be impractical to require applicants to specify a particular number as a cutoff between their invention and the prior art."

[Emphasis Supplied]

The rejection should be withdrawn.



The Office Action stated that the following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28 to 29, 51, 52, 56, and 57 "are" [emphasis supplied ] rejected under 35 U.S.C. §102(b) as anticipated by Heyes et al. (U.S. Patent No. 5,093,208) for the reasons of record as set forth in Paragraph No. 9 of the Office Action, mailed on February 13, 2003, (Paper No. 9). Applicants traverse this rejection.

Independent Claim 28 involves a process that starts out requiring the coextrusion of a polyethylene-based plastic or a polypropylene-based plastic, and an adhesion promotion agent. The coextrudate and an aluminum foil are laminated together between two rollers (with the adhesion promotion agent being next to the aluminum foil). The temperature of the coextruded-coated aluminum foil being such that the temperature of the outer surface of the plastic of the coextrudate lies below the crystallite melt point of the plastic. The coextrudate exits the extruder with its components in the melted state. In order for the outer surface of the coextrudate to be below the plastic's crystallite melt point (upon the lamination step being done), the temperature of the coextruded-coated aluminum foil has to be lower than the plastic's crystallite melt point. This physical reality and result are inherent from the recited claim limitation. To physically achieve the stated result of the claim limitation, the aluminum

foil at the onset of the lamination step has to have a temperature below the plastic's crystallite melt point. (The Examiner agreed that the specification showed the aluminum foil being at room temperature at the start of the lamination step.) The aluminum foil at the lower temperature acts as a heat sink regarding the coextrudate thereby resulting in the outer surface of plastic (layer) being below the plastic's crystallite melt point ( $T_K$ ). Heyes et al. does not disclose applicants' claim limitation of the aluminum foil, after lamination, being such that the temperature of the outer surface of the plastic of the coextrudate is below the plastic's crystallite melt point.

Applicants coextrude the polyolefin (i.e., polypropylene or polyethylene) and the adhesion-promotion agent. The melted materials exit the coextruder nozzle. The coextrudate is still very hot for a substantial time after exiting the nozzle. These are inherent features of the coextrusion in applicants' process.

When the very hot coextrudate is combined with the aluminum foil, the temperature of the aluminum has to be low enough so that the outer surface of the polyolefinic portion of the coextrudate stays below the crystallite melt point ( $T_K$ ) of the olefin. The coextrudate is combined with the aluminum foil between two rollers. The aluminum foil acts as a heat sink regarding the coextrudate – this is inherent – thereby maintaining the temperature of the outer surface of the plastic coating below the crystallite melt point ( $T_K$ ) of the olefinic plastic.

Nowhere does Heyes et al. teach (or even suggest) using the aluminum foil as a heat sink. Heyes et al. teaches preheating (heater 1, e.g.) the aluminum foil to above or near the melting point of the polyester - that then results in raising (not lowering) the temperature of the cooler polyester coating. Figures 1 and 2 of Heyes et al. show its

polyester in rolls at room temperature. Heyes et al. uses the heated aluminum as a heat source. Heyes et al. does not anticipate any of applicants' process claims.

The invention of Heyes et al. is limited to using extrudates or coextrudates of polyester or polyesters. On this ground alone the Heyes et al. invention does not anticipate any of applicants' process claims.

In discussing and disclosing the prior art (see column 1, lines 14 to 36) and the disadvantages thereof compared to Heyes et al.'s invention, Heyes et al. discloses that such prior art polyolefin coatings on metal sheet (aluminum foil) are unsatisfactory for the manufacture of drawn and wall-ironed cans (DWI cans). Examples 11 and 12 of Heyes et al. are examples of prior art using polyolefin coatings for comparison to the Heyes et al. invention. Prior art Examples 11 and 12 use laminate types H and I, respectively, that each has coextruded polypropylene composite film on both sides of the aluminum sheet. (The laminates of both prior art Examples 11 and 12 are stated to exhibit poor formability and to give metal failure in can forming.) Prior art Examples 11 and 12 of Heyes et al. use the Heyes et al. method of laminate formation that includes using "preheating the metal strips" and then passing the coextruded polyolefin composite films and the preheated metal strips into a pair of nip rolls. Accordingly, prior art Examples 11 and 12 of Heyes et al. also do not anticipate any of the applicants' process claims.

Nowhere does the invention of Heyes et al. teach lamination using aluminum sheet that has a temperature lower than the coextruded polyester film. Heyes et al. generically discloses laminating the coextruded polyester film to the metal sheet but such disclosure is not anticipatory because it does not teach all of the requirements and

limitations of applicants' process claims. Heyes et al.'s generic disclosure is not a teaching of a process step where the relatively cool temperature of the aluminum foil causes the outer surface of the hot polyolefin to stay below its crystallite melt point ( $T_K$ ).

Heyes et al. states:

"The laminated metal sheet of the invention is prepared by a process which compromises adhering directly to one or both major surfaces of the metal sheet a film comprising a polyester, the lamination conditions being such that during lamination the polyester film or films in the metal/polymer laminate is or are converted into non-crystalline or amorphous form." [Col. 3, lines 33 to 39]

The only specific schemes taught in Heyes et al. are ones which use preheating of the aluminum sheet.

Heyes et al. states:

"In one preferred process of preparing the metal polymer laminates in accordance with the invention polyester monolayer film or films are adhered to the metal sheet by heating the metal sheet to a temperature ( $T_1$ ) above the melting point of the polyester films, the temperature ( $T_1$ ) being such that during lamination of the polyester films to the metal sheet, the outer surfaces of the polyester films remain below their melting points...."

"In an alternative preferred process, the polyester film or films are composite films (A) comprising an inner layer (A1) and an outer layer (A2), and the composite polyester films are simultaneously adhered to the metal sheet by a process which comprises

(1) heating the metal sheet to a temperature (T<sub>1</sub>) above the softening point of the polyester inner layer (A1) but below the melting point of the outer layer (A2),...."

[Emphasis supplied] [Col. 3, lines 40 to 62]

In the disclosure of Heyes et al. that deals specifically with the temperature of the coextruded plastic coatings, the coextruded plastic materials are at a temperature less than the preheated metal (aluminum) sheet. Heyes et al. states:

"Polymer/metal/polymer laminates were prepared by a lamination process performed in apparatus as illustrated schematically in FIG. 1 or FIG. 2 of the accompanying drawings. A metal sheet M was pre-heated by infrared or induction heating to an appropriate temperature T<sub>1</sub> by a heater 1. Temperature T<sub>1</sub> is usually within the range 140° and 350°C. Polyester films A and B were fed from feed rolls 2 and 4 and laminated to the opposite sides of the pre-heated metal sheet between lamination rolls 6, 8...." [Emphasis supplied] [Col. 6, line 65, to Col. 7, line 5]

Figures 1 and 2 of Heyes et al. do not show any preheating of polyester films A and B, either in the rolled up state or being fed to lamination rolls 6, 8. Since Heyes et al. does not recite any temperature for polyester films A and B before the lamination steps (rollers 6, 8), in accordance with scientific/technical practice (and C.C.P.A. decision), polyester films A and B were at room temperature.

Heyes et al. only discloses generically adhering a polyester to a metal sheet [without any reference to the temperature of either substance, or specifically adhering a polyester (or polyolefin) film to a metal sheet that has been preheated], with specific disclosure showing that the polyester film is at room temperature (that is, below the

preheating temperature of the metal sheet). Heyes et al. is not an anticipatory reference.

The Examiner has written that it is the Examiner's position that the surface area of the cooled PP layer has claimed properties such that if the quenched non-crystalline plastic still has small amounts of crystals, then the crystal grains are as small as possible inherently since it is produced by a method identical or substantially identical processes to that of claimed invention. Applicants' traverse this statement as being factually incorrect and mere speculation unsupported by the record. The process of Heyes et al. and the process of the applicants' claims are not identical or substantially identified, as shown above. The difference between preheating the aluminum sheet and the coextruded polyolefin/adhesion-promotion agent results in substantial differences. The Examiner's assertion of Heyes et al. inherently achieving crystal grains as small as possible is faulty and lacks factual support.

Regarding Heyes et al.'s comparative prior art Examples 11 and 12, Heyes et al. states:

"Examples 11 and 12 show that laminates formed from polypropylene materials of the type described in GB 2003415 exhibited poor formality. Such laminates were found to give metal failure can forming." [Emphasis supplied]  
[Col. 9, lines 65 to 68]

Table II also recites poor formability for comparative prior art Examples 11 and 12.

So it is clear that Heyes et al. did not inherently achieve grains having an extremely small size when PP-laminates were formed in Hayes et al.'s comparative prior art Examples 11 and 12. Both of these comparative prior art examples using PP-

material are not part of the Hayes et al. invention that uses only polyesters and seeks to avoid such prior art and its stated problems.

The feature of applicants' process of using hot coextruded polyolefin/adhesion-promotion agent and cooler aluminum foil helps provide different results. The hot/soft polyolefin/adhesion-promotion agent of applicants' process has more time in the nip region to effect elevated temperature adhesion to the aluminum foil than does the scheme of Heyes et al. wherein the plastic composite has to first be heated up by the preheated aluminum sheet during the very short time period involved in passing through the two laminated rollers. The Examiner's attempt to use the concept of inherency fails (even for Hayes et al.'s comparative prior art Examples 11 and 12).

Applicants' process produces containers that have essentially no white breaks in the deformation area.

Applicants claim a one-step production process that substantially differs from the multi-step production process of Heyes et al. There are actual physical differences in the processes that are not ones "claimed in terms of function property or characteristics." As shown above, the products of the two processes differ. The burden of proof has not shifted to applicants.

The Examiner has not factually established in the record that a prima facie showing of anticipation exists. The two processes are substantially different. Applicants have shown that the Examiner has not established a prima facie showing of anticipation of or any other of applicants' claims.

The Office Action stated that the plastic coating of Heyes et al. would have claimed properties, e.g., crystal grains have "an extremely small size", as required by amended Claim 28, or is substantially amorphous, as required by Claims 56 and 57, since it is prepared and processed by methods substantially identical to that of claimed invention. Applicants traverse this statement. Also applicant have shown that this statement is incorrect.

The Office Action stated: that it is held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, claimed properties or functions are presumed to be inherent; and see MPEP 2111.02, 2112.01. The Examiner has not factually shown in the record that the claimed and prior art products, etc., are identical or even substantially identical.

The Office Action cited *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." But the Examiner does not have any such sound basis.

The Office Action also cited *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 990). This case does not support the Examiner.

This rejection should be withdrawn.

The Office Action stated that the following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section §102 of this title, if the differences between the



subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30 to 50 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Heyes et al (U.S. Patent No. 5,093,208) in view of Takano et al (U.S. Patent No. 5,837,360) for the reasons of record as set forth in Paragraph No. 11 of the Office Action, mailed on February 13, 2003, (Paper No. 9). Applicants traverse this rejection.

Heyes et al. preheats an aluminum foil to a temperature that will melt or soften the polypropylene used in its comparison prior art Examples 11 and 12. As these are comparison examples, the procedure is the same as the Heyes et al. invention examples. The plastic films (H, I, respectively) are at room temperature when they are fed to roller (6, 8) to be laminated with the heated aluminum foil. (Since no temperature is given for the plastic films, convention is that they are at room temperature.) Therefore, Heyes et al., and comparison prior art Examples 11 and 12, discloses heating room temperature polypropylene films with preheated aluminum foil (i.e., at a temperature above that of the polypropylene films) when laminating such films/foil in rollers (6, 8); the plastic films thereby act as heat sinks. Accordingly, Heyes et al. does not teach or suggest any of applicants' claims

In applicants' claimed process, the aluminum foil is required to act as a heat sink, and to be at a temperature below that the (thermoplastic) PE to PP coextrudate at the start of the lamination in the two rollers. This is shown by dependent Claim 47 which

recites the aluminum foil is at room temperature when the films/foil are combined. The Examiner's report of the personal interview shows that the Examiner apparently agreed that applicants' disclosure supported the temperature of the aluminum foil being at room temperature at the time of the films/foil being fed into the two rollers. In this manner, the temperature of the aluminum foil after lamination is such that the temperature of the outer surface of the PP of the coextrudate lies before the crystallite melt point of the PP. Since the coextrudate comes from a coextruder, it is at a higher temperature than the, say, room temperature aluminum foil of Claim 47. The coextrudate starts at a higher temperature than the aluminum foil and cannot end at a lower temperature than the aluminum foil after the roller lamination. This is the result from applicants' claim language (and disclosure), so Heyes et al.'s comparative prior art Examples 11 and 12 do not provide the same process as applicants' claimed process.

The following discussion shows that also Heyes et al. does not make any of applicants' claims obvious.

Applicants' process includes the step of coextruding the plastic (PP or PE) and the adhesion-promotion agent. The oleofinic plastic and the adhesion-promotion agent are melted in the extruder barrel. The New Encyclopedia Britannica, Macropaedia, Volume 14, (1974), states:

"Extrusion. A major technique of the plastics industry, extrusion consists essentially of the melting and compression of plastic granules by the rotation of a screw conveyor in a long barrel to which heat and cold can be applied. The screw drives the plastic through a nozzle.....so as to compress and generally homogenize the melting plastic...; it serves to complete the

melting...and...pumping the molten plastic through the shaping nozzle.”

[Emphasis supplied] [Page 519]

Upon exiting from the coextruder, applicants' process moves the coextrudate rapidly to the two-rollers, where it is combined with the aluminum foil as both begin to pass through the two rollers. The aluminum foil acts as a heat sink.

One of the very core purposes of Heyes et al. is to provide an invention that does not use polyolefin coatings, that avoids the problems caused by the use of polyolefin coatings, and that provides advantages over polyolefin coatings. Heyes et al. states:

“It is known to use steel or aluminum coated with polyolefin coatings as a stock preparing DWI cans. Such materials are described, for example, in U.S. Pat. No 4,096,815 and British Patent 2003415; as far as we are aware, such materials have not found commercial application.”

“We have found that polyolefin coatings do not form as well as thermoplastic polyesters.” [Emphasis supplied] [Column 1, lines 14 to 21]

“Such [substantially non-crystalline or amorphous thermoplastic polyester] coatings out-perform polyolefin coatings in DWI can forming, and retain better continuity and protection.” [Emphasis supplied] [Column 1, lines 41 to 43]

Heyes et al. directs away from the use of polyolefin coatings and, hence, also directs away from applicants' claimed process.

As shown above, the comparison prior art Examples 11 and 12 of Heyes et al. (that combined polypropylene composite films and preheated aluminum sheet) provided “poor” formability and gave metal failure in can forming. One ordinarily skilled in the art is pointed away by Heyes et al. from the use of polypropylene coatings.

Applicants have shown above that applicants' claimed process is not obvious over Heyes et al. Takano et al. does not cure the defects in Heyes et al. in the search for applicants' claimed invention. The Examiner, who has the burden of proof, has not factually established in the record a prima facie showing of obviousness of applicants' claimed process.

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The Supreme Court in *United States v. Adams*, 148 USPQ 479, (1966), stated:

"We do say, however, that known disadvantages in old devices which would naturally discourage the search for new inventions may be taken into account in determining obviousness." [Emphasis Supplied] [Page 484]

Citing the above-quoted portion of the *Adams* decision, the C.A.F.C. in *In re Gurley*, 31 USPQ2d 1131. (1994) stated:

"...; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be

productive of the result sought by the applicant." [Emphasis Supplied]

[Page 1131]

This, of course, is exactly what comparative prior art Examples 11 and 12 of Heyes et al. do, that is, suggest that the Heyes et al. comparative prior art disclosure is unlikely to be productive of the results sought (and achieved) by the appellants.

In the subject art of the claimed invention, Heyes et al. clearly shows that polyolefins and polyesters were not considered by one ordinarily skilled in the art to be equivalent.

Heyes et al. does not make any of appellants' claims obvious; and Takano et al. does not cure the defects of Heyes et al. in the search for appellants' claimed invention. Heyes et al. also teaches one ordinarily skilled in the art to not use polyolefin coatings aluminum foil (metal sheet) if drawn and wall-ironed cans are to be manufactured therefrom.

Takano et al. also directs one ordinarily skilled in the art away from appellants' claimed invention. In Takano et al., polypropylene and a modified polypropylene are melt-coextruded and laminated on at least one side of a preheated steel sheet, i.e., desirably preheated to a temperature of from 100°C to 160°C. Takano et al. asserts that any preheating below 100°C is unsatisfactory because then the laminated entity would be below the minimum temperature for initiation of the subsequent quenching. Note also that Takano et al. does not disclose laminating by passing the films and sheet through a pair of rollers.

Levendusky et al., i.e., U.S. Patent No. 5,919,517 (cited by the Examiner), in its background-of-the-invention section, states:

"U.S. Pat. No. 5,093,208 to Heyes et al. discloses a method for forming a laminated metal sheet in which a precast thermoplastic polyester film is pressed against one or both surfaces of a metal sheet to adhere the film to the sheet in a pressed against one or both surfaces of a metal sheet to adhere the film to the sheet in a non-crystalline form. The uncoated sheet of metal is heated to a temperature above the melting point of the polyester film and the film is applied to the sheet under pressure to form a laminate material." [Emphasis supplied]  
[Column 1, lines 29 to 37]

(Levendusky et al. is assigned to Alcoa.) The art, and one ordinarily skilled in the art, view Heyes et al. as preheating the uncoated aluminum sheet to a temperature above the melting point of the polyester film. The Examiner's attempt to stick Takano et al. into Heyes et al. would destroy the invention of Heyes et al.

The Examiner has written that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used any conventional cooling means including ice-cooled water, cooled gas, water spray, or partial looping over at least one cooled roller of a metal foil containing laminate shock-like cooling of a coated metal foil of Heyes et al. in view of Takano et al. since Takano et al. teaches that the shock-like cooling can be carried out by any known means provided that cooling conditions are satisfied. Applicants traverse this statement. One ordinarily skilled in the art would not have any motivation to insert Takano et al. into Heyes et al.

Heyes et al. discloses (i) a generic process and (ii) two preferred subgeneric/species processes. The two preferred subgeneric/species processes are each multi-stepped with one step thereof using a metal sheet preheated to above the

melting point of the polyester film (i) or preheated to between above the softening point of the polyester inner layer and below the melting point of the outer layer (ii). Column 3, lines 40 to 45, of Heyes et al. does not mention PP - it only recites polyester. Nowhere does Heyes et al. say it is preferred to laminate coextruded hot PP-based layers to a heated aluminum foil (this step is one step in a preferred multi-step process). Furthermore, Heyes et al. directs away from the use of PP because it provides poor results, etc.

Also, nowhere does Heyes et al. disclose the use of hot coextruded PP-based layers. Figures 1 and 2 show rolls of polyester film being used - there is no indication that they are other than at room temperature.

Takano et al. requires a steel sheet preheated between 100°C and 160°C. Takano et al. does not disclose the use of rollers for lamination.

Takano et al. states: "The temperature of the \*\*\* combination \*\*\* becomes nearly equal to the preheating temperature of the steel sheet immediately after the lamination \*\*\*." [Column 5, lines 36 to 40] Takano et al. does not use rollers so it is not relevant to Heyes et al.

Applicants achieve lamination in a very short time, that is, almost instantaneously in the very short distance of contact point/region between the two rollers. The melted coextrudate adheres to the aluminum foil, with apparently improved adherence, almost instantaneously, with its outer surface cooling below the crystallite melt point.

The two rejection references are not combinable in the search for applicants' claimed invention. Even if the two rejection references are combined the result is not



applicants' claimed invention. The Examiner has not factually established in the record a prima facie showing of obviousness.

The combination of Heyes et al. and Takano et al. does not result in, or suggest, any of applicants' claims.

This rejection should be withdrawn.

The Office Action stated that "THIS ACTION IS MADE FINAL".

The Office Action stated that a shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action; that in the event a first reply is filed within TWO MONTHS of the mailing date of this Final Action and the Advisory Action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the Advisory Action is mailed, and any extension fee pursuant to 37 CFR §1.136(a) will be calculated from the mailing date of the Advisory Action; and that in no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Withdrawal of the rejection requested.

Reconsideration, reexamination and allowance of the claims is requested.

Respectfully Submitted,

Feb. 12, 2007  
Date

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